	Application No.	Applicant(s)	
Notice of Allowability	10/816,178	JOHNSON ET AL.	
	Examiner	Art Unit	_
	Hai L. Nguyen	2816	
The MAILING DATE of this communication at All claims being allowable, PROSECUTION ON THE MERITS therewith (or previously mailed), a Notice of Allowance (PTOLNOTICE OF ALLOWABILITY IS NOT A GRANT OF PATEN of the Office or upon petition by the applicant. See 37 CFR 1	S IS (OR REMAINS) CLOSED in the state of the	n this application. If not included unication will be mailed in due course. THIS	ve
<ol> <li>This communication is responsive to the amendment fi</li> </ol>	<u>iled on 01/09/2006</u> .		
2. X The allowed claim(s) is/are <u>1,2,4-11,13-22,24-33,35-45</u>	<u>5 and 47-55</u> .		
<ul> <li>3. Acknowledgment is made of a claim for foreign priorit</li> <li>a) All b) Some* c) None of the:</li> <li>1. Certified copies of the priority documents here.</li> <li>2. Certified copies of the priority documents here.</li> <li>3. Copies of the certified copies of the priority.</li> </ul>	nave been received.  nave been received in Applicati	on No	
International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:		•	ı
Applicant has THREE MONTHS FROM THE "MAILING DA' noted below. Failure to timely comply will result in ABANDO THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  4. A SUBSTITUTE OATH OR DECLARATION must be sure INFORMAL PATENT APPLICATION (PTO-152) which  5. CORRECTED DRAWINGS (as "replacement sheets")  (a) including changes required by the Notice of Drafts  1) hereto or 2) to Paper No./Mail Date  (b) including changes required by the attached Examin Paper No./Mail Date  Identifying indicia such as the application number (see 37 Cleach sheet. Replacement sheet(s) should be labeled as such attached Examiner's comment regarding REQUIREME	DNMENT of this application.  Jubmitted. Note the attached EX gives reason(s) why the oath of must be submitted.  person's Patent Drawing Revie  ner's Amendment / Comment of the header according to 37 Ceposit of BIOLOGICAL MAT	AMINER'S AMENDMENT or NOTICE OF or declaration is deficient.  w ( PTO-948) attached or in the Office action of the drawings in the front (not the back) of FR 1.121(d).  ERIAL must be submitted. Note the	
Attachment(s)  1. ☐ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-94)  3. ☐ Information Disclosure Statements (PTO-1449 or PTO/5 Paper No./Mail Date	6. Interview S Paper No SB/08), 7. Examiner's	Informal Patent Application (PTO-152) Summary (PTO-413), /Mail Date My-Trans Number (PTO-152)	

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## **DETAILED ACTION**

## **REASON FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose a phase detector circuit (80 in instant Fig. 8), having specific structural limitations such as a first delay circuit (84) having an output and an input coupled to receive the first input signal (CLK REF), the first delay circuit being operable to delay the first input signal by a first delay value and couple the delayed first input signal to the output; a second delay circuit (90) having an output and an input coupled to receive the second input signal (CLK FB), the second delay circuit being operable to delay the second input signal by a second delay value and couple the delayed second input signal to the output; a third delay circuit (88) having an output and an input coupled to receive the first input signal, the third delay circuit being operable to delay the first input signal by a third delay value and couple the delayed first input signal to the output; a fourth delay circuit (92) having an output and an input coupled to receive the second input signal, the fourth delay circuit being operable to delay the second input signal by a fourth delay value and couple the delayed second input signal to the output; a first flip-flop (upper 60) having a set input coupled to the output of the first delay circuit, a reset input coupled to the output of the second delay circuit, and a pair of complimentary first and second outputs; and a second flip-flop (lower 60) having a set input coupled to the output of the third delay circuit, a reset input coupled to the output of the fourth delay circuit, and a pair of complimentary first and second outputs (INCR, DECR), and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

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2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Busines1s Center (EBC) at 866-217-9197 (toll-free).

April 13, 2006

MY-TRANG NUTON PRIMARY EXAMINER

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